

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method using a computer system for collecting persistent code coverage data for a computer program, the computer program comprising program source code statements, the method comprising the steps of:

identifying the computer program for which the persistent code coverage data should be collected;

dividing the program source code statements of said computer program into a plurality of code coverage tasks, each of the plurality of code coverage tasks comprising a plurality of basic blocks of code wherein one of the plurality of basic blocks~~in which the basic block~~ of code comprises ~~is~~ a set of consecutive statements with a single entry point and a single exit point and wherein one of the plurality of basic blocks of code comprises a control statement, which comprises a conditional statement, separate from the set of consecutive statements;

generating a persistent unique name for each of the plurality of basic blocks of code of each of the code coverage tasks of said plurality of code coverage tasks;

inserting coverage points into the computer program source code for each of the code coverage tasks to produce an instrumented program;

compiling and linking the instrumented program into a program executable;

identifying a set of test cases from a plurality of test cases to be run for the code coverage data collection purposes;

creating a code coverage database using the code coverage tasks and the identified set of test cases;

running the program executable with a test case from the identified set of test cases and writing the information about the test case and the coverage points that are executed into an output file, until all the test cases have been run; and

processing the information contained in the output file into code coverage data and populating the code coverage database with said code coverage data.

2. (original): The method of Claim 1, wherein generating the persistent unique name for each of the code coverage tasks is done using a unique naming convention.
3. (original): The method of Claim 2, wherein the unique naming convention comprises a computer program module name, a version indicator, and a unique code coverage task identifier.
4. (original): The method of Claim 1, wherein the code coverage database comprises a table, the table comprising a row for each test case in said identified set of test cases and a column for each code coverage task of said plurality of code coverage tasks, said column comprising an indicator at each row indicating coverage status for said code coverage task.
5. (original): The method of Claim 1, wherein said computer program comprises program source code statements written in a hardware description language.
6. (original): The method of Claim 1 further comprising the steps of:

modifying the computer program to produce a modified version of the computer program source code;

identifying a plurality of new, modified, and deleted code coverage tasks in said modified version of the computer program source code;

generating a persistent unique name for each of the new and modified code coverage tasks of said plurality of new, modified and deleted code coverage tasks;

inserting coverage points into the modified version of the computer program source code for each of the new and modified code coverage tasks to produce an instrumented modified version of the computer program source code;

compiling and linking the instrumented modified version of the computer program source code into a modified program executable;

identifying a new set of test cases from a plurality of test cases to be run for the code coverage data collection purposes on the new and modified code coverage tasks;

altering the code coverage database to accommodate new, modified and deleted code coverage tasks and the new set of test cases, and clearing any code coverage data for the modified code coverage tasks from said code coverage database;

running the modified program executable with a test case from the identified new set of test cases and collecting code coverage data for the new and modified code coverage tasks, until all the test cases have been run; and

updating the code coverage database with the collected code coverage data for the new and modified code coverage tasks;

whereby the previously collected code coverage data for the non-affected code coverage tasks is preserved from a previous version of the computer program to the modified version of said computer program eliminating the need for running the entire test bucket.

7. (original): The method of Claim 6, wherein generating a persistent unique name for each of the modified code coverage tasks is done by changing the version indicator in the names of said modified code coverage tasks.

8.-21. (canceled).

22. (previously presented): The method according to claim 1, wherein the persistent unique name comprises a string having a plurality of components reflecting the code coverage task, wherein only a component of the string of the code coverage task which has been modified is altered while maintaining non-modified components of the string.